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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,165	11/25/2003	Sei-No-Suke Mizuno	GOT-0019	4328

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EXAMINER	
JACKSON, MONIQUE R	
ART UNIT	**PAPER NUMBER**
1773	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/720,165	MIZUNO ET AL.	
	Examiner	Art Unit	
	Monique R. Jackson	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed 9/15/05 has been entered. Claims 1-7 are pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann (USPN 3,839, 129.) Neumann teaches a reflective foil that may be adhered to a structure such as in an injection molding process wherein the foil comprises a substrate, a vacuum metallized metal layer, and a protective film over the metal layer (Abstract; Figures.) Neumann teaches that the substrate may be a clear material such as a polyester film having a thickness from about 0.5 to about 20 mils, the protective film is preferably a polyester resin film with high light transmittance, and the metal layer may be formed of more than one vacuum metallized layer applied to either polyester film (Col. 2, line 27-Col. 3, line 34; Col. 3, line 43-Col. 4, line 5; Col. 4, lines 18-62; Claims.) Neumann further teaches that the substrate layer may be provided with an adhesive coating layer for bonding the substrate to the metallized layer or an adhesive may be applied to the foil on the substrate side to which the injection molded article would adhere (Col. 5, lines 1-8; Claims 8-9.) Neumann also teaches that the foils may be constructed or designed to fit their particular end use and that variations in the metallization techniques and varying amounts of metallic deposits will result in different degrees of light transmission and reflection, wherein vacuum metallizing may be conducted utilizing well-known techniques in the art (Col. 3, line 43-Col. 4, line 2.) Though Neumann does not teach that the metal layer comprises a first

vapor deposited layer of an alloy consisting essentially of nickel, chromium, molybdenum and tungsten, and a second vapor deposited layer of chromium, titanium or nickel, or respective alloy thereof, as instantly claimed, these metals and alloys thereof are conventional and obvious species of metals or alloys utilized in the vacuum metallization of polymers to produce reflective articles and would have obvious to one having ordinary skill in the art at the time of the invention. Further, one having ordinary skill in the art at the time of the invention would have been motivated to determine the optimum metal or alloys to utilize from these obvious species and to utilize routine experimentation to determine the optimum number of metallized layers and layer thickness to provide the desired color and optical properties for a particular end use as taught by Neumann.

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurfman (USPN 4,510,208.) Kurfman teaches a thermoformable multilayer metal/organic polymer composite which has a formable transparent thermoplastic polymer layer, a first metal layer adhered to the polymer layer, and a second metal layer adhered to the first metal layer, wherein the metal layers may be formed by vacuum deposition of one metal or an alloy of two or more metals with suitable metals including copper, nickel and silver, and wherein a polymer protective coating, such an acrylic or polyethylene terephthalate coating, may be applied over the metal layer prior to a forming operation (Abstract; Col. 5, lines 46-64; Col. 10, lines 13-40; Col. 12, lines 25-49.) The thermoplastic polymer layer is generally transparent, has a thickness of from about 2 microns, and may be selected from various polymers including polyesters and fluorinated olefins (Col. 5, line 46-Col 6, line 20; Col. 6, line 46-54.) Kurfman further teaches that the multilayer composite may be formed into a desired shape such as by thermoforming

and/or may be laminated with a reinforcing material cast to a desired shape (Col. 13, line 22-Col. 14, line 44.) Though Kurfman does not teach that the metal layer comprises a first vapor deposited layer of an alloy consisting essentially of nickel, chromium, molybdenum and tungsten, and a second vapor deposited layer of chromium, titanium or nickel, or respective alloy thereof, as instantly claimed, these metals and alloys thereof are conventional and obvious species of metals or alloys utilized in the vacuum metallization of polymers to produce metallized polymer multilayer composites and would have obvious to one having ordinary skill in the art at the time of the invention. Further, one having ordinary skill in the art at the time of the invention would have been motivated to determine the optimum metal or alloys to utilize from these obvious species and to utilize routine experimentation to determine the optimum layer thickness to provide the desired color and optical properties for a particular end use of the invention taught by Kurfman.

Response to Arguments

5. Applicant's arguments filed 9/15/05 have been fully considered but they are not persuasive. The Applicant argues that the references do not teach a first metal layer comprising the metal alloy as instantly claimed and a second metal layer of chromium, titanium or nickel, however as discussed above the references clearly teach two adjacent metal or metal alloy layers wherein the instantly claimed metals and alloys would have been obvious to one skilled in the art at the time of the invention given that they are conventional and obvious species of metals or alloys utilized in the vacuum metallization of polymers to produce metallized polymer multilayer composites. Hence, considering the Applicant has provided no clear reasons why one skilled in the art would not have been motivated to select from any conventional metal or metal alloy, or

combination thereof for the two layers, the Examiner maintains her position that the instant invention would have been obvious over the cited references.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monique R. Jackson
Primary Examiner
Technology Center 1700
December 12, 2005